

AMENDMENTS TO THE CLAIMS

Claim 1 (previously presented). A device for analysis of material by means of radiation, including
a radiation source (6) for producing low energy radiation (34),
a sample location (8) for accommodating a sample (10) of the material to be analyzed,
a position sensitive detection device (9) for detecting the radiation (40) emanating from the sample,
which detection device includes
- an array (42) of radiation sensitive detector elements (44),
- an electronic read-out circuit (48) which is connected to the detector array and includes charge amplifiers (58) in a one-to-one relationship with the detector elements (44), the input of said charge amplifiers being connected to a respective one of the detector elements,
characterized in that
the charge amplifiers (58) are constructed in the integrated bipolar technique, and that the electronic read-out circuit (48) includes digital signal processing circuits (74-82) which are connected to the outputs of the charge amplifiers and are constructed in the digital technique, wherein the digital signal processing circuits are accommodated on the same substrate as the charge amplifiers 58, and wherein the digital signal processing circuits are constructed by means of a BICMOS process in the form of the Current Mode Logic (CML) technique.

Claim 2 (canceled).

Claim 3 (canceled).

Claim 4 (currently amended). A device as claimed in claim 1, wherein the assembly formed by the detector array (42) and the electronic read-out circuits circuit (48) is accommodated on a common support (55) made of a ceramic material.

Claim 5 (currently amended). A position sensitive detection device ~~for detecting radiation as defined in claim 1.~~ (9) for

detecting the radiation (40) emanating from the sample,

which detection device includes

- an array (42) of radiation sensitive detector elements

(44),

- an electronic read-out circuit (48) which is connected to
the detector array and includes charge amplifiers (58) in a one-to-
one relationship with the detector elements (44), the input of said
charge amplifiers being connected to a respective one of the
detector elements,

characterized in that

the charge amplifiers (58) are constructed in the integrated bipolar
technique, and that the electronic read-out circuit (48) includes
digital signal processing circuits (74-82) which are connected to
the outputs of the charge amplifiers and are constructed in the
digital technique, wherein the digital signal processing circuits
are accommodated on the same substrate as the charge amplifiers 58,
and wherein the digital signal processing circuits are constructed
by means of a BICMOS process in the form of the Current Mode Logic
(CML) technique.